

Botkin & Keller- 8th Edition

## Chapter 8- Biological Diversity and Biological Invasions

Name: \_\_\_\_\_

1: What is **biological diversity**?

2: What is a **population**?

3: What is a **species**?

4: What are the 9 reasons why people *value biodiversity*?

*Define the following:*

\* **Genetic Diversity:**

\* **Habitat Diversity:**

\* **Species Diversity:**

\* **Species Richness:**

\* **Species Evenness:**

\* **Dominant Species:**

5: What are the **3 main domains** of life?

6: What is **biological evolution**?

7: What causes **mutations**? *Explain how this affects biological diversity.*

8: What is **natural selection**? What are the **4 primary factors** involved in natural selection?

### A Closer Look 8.1

#### Natural Selection: Mosquitos and the Malaria Parasite

1: Discuss the issue with Malaria, Mosquitos and DDT resistance and *how this demonstrates natural selection.*

## Migration and Geographic Isolation

- 1: How does Darwin's Finches demonstrate the idea of **Adaptive Radiation**?
- 2: Define: **Genetic Drift**
- 3: What is the **Founder Effect** and how does it demonstrate Genetic Drift?

## Biological Evolution as a Strange Kind of Game

In summary, *the theory of biological evolution* tells us the following about biodiversity:

- 1:
- 2:
- 3:
- 4:

## The Competitive Exclusion Principle

- 1: Explain how the introduction of the American Gray Squirrel into Great Britain demonstrates the **Competitive Exclusion Principle**.

## Measuring Niches

- 1: What is an **ecological niche**?
- 2: What is the difference between a **fundamental** and **realized niche**?

## Symbiosis

- 1: In ecology, symbiosis describes a relationship between two organisms that is beneficial to both- each partner in symbiosis is called a: \_\_\_\_\_
- 2: What is an **obligate symbiont**?
- 3: Explain the symbiotic relationship between people and dogs

### **Predation and Parasitism**

1: Explain how predation and parasitism actually helps increase species diversity in an ecosystem

### **How Geography and Geology Affect Biological Diversity**

1: In general, greater diversity occurs: \_\_\_\_\_

2: What **geographic factors** affect species biodiversity?

3: How can **moderate environmental disturbances** increase diversity?

4: How do **people** affect diversity? Explain.

<b>Factors That Tend to Increase Diversity</b>	<b>Factors That Tend to Decrease Diversity</b>
1:	1:
2:	2:
3:	3:
4:	4:
5:	5:
6:	6:
7:	

### **Convergent and Divergent Evolution**

1: *Define and give an example* of each of the following:

\* **Convergent Evolution**

\* **Divergent Evolution**

### **Invasions, Invasive Species and Island Biogeography**

1: What are the *4 main principles* in the **theory of island biogeography**?

2: What is an **ecological island**?

### **Study Questions**

1: Why do introduced species often become pests?